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August 21, 2003

SUBJECT: Westinghouse Review of COL Action Items Identified in the AP1000 Draft Safety Evaluation Report and the AP1000 Design Control Document

Westinghouse has completed a review of the Combined Operating License Action Items identified in the AP1000 Draft Safety Evaluation Report and the AP1000 Design Control Document, and the results of that review are provided in Attachment 1. Table 1 of Attachment 1 is a cross-reference of those items identified in the DSER to the corresponding COL Action Item identified in the AP1000 DCD, and includes a short description of the item. Note that certain items that were not formally identified as COL Action Items in the DSER are also identified. The text of the DSER suggests that these items would be formally identified as a COL Action Item for the FSER. Table 2 of Attachment 1 identifies those COL Action Items identified in the DCD that were not discussed in the DSER.

The information in Attachment 1 is similar in scope and content to the information provided in Appendix F of the AP600 Final Safety Evaluation Report, and can be used by the staff to develop the AP1000 FSER Appendix F. The information in Attachment 1 reflects information that will be included in the upcoming Revision 7 of the AP1000 DCD.

As a result of this review, inconsistencies were identified in DCD Table 1.8-2 and the information included in other sections of the DCD. These inconsistencies will be corrected in DCD Revision 7. Attachment 2 provides the DCD changes that will be included in Revision 7 that result from this review.

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Please contact me if you have further questions on this information.

Very truly yours,

M. M. Corletti
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/Attachments

1. "Summary of Westinghouse Review of Combined Operating License Action Items identified in the AP1000 Draft Safety Evaluation Report and the AP1000 Design Control Document", Tables 1 and 2

2. "Proposed DCD Changes Resulting from Westinghouse Review of COL Action Items"

August 21, 2003

Attachment 1

"Summary of Westinghouse Review of Combined Operating License Action Items identified in the AP1000 Draft Safety Evaluation Report and the AP1000 Design Control Document"

Table 1
"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"

Table 2
"DCD COL Information Items Not Identified in the DSER as COL Action Items"

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see page 2-1.	2.1-1	2.1.1	The COL applicant will provide site-specific information related to site location and description, exclusion area authority and control, and population distribution.
No COL Action item number assigned, see pages 2-2 and 2-3.	2.2-1	2.2.1	The COL applicant will provide analyses of accidents external to the nuclear plant.
2.3.1-1	2.3-1	2.3.6.1	The regional climatology is site-specific and will be addressed by the COL applicant.
2.3.2-1	2.3-2	2.3.6.2	The local meteorology is site-specific and will be addressed by the COL applicant.
2.3.3-1	2.3-3	2.3.6.3	The onsite meteorological measurements program is site-specific and will be addressed by the COL applicant.
2.3.4-1	2.3-4	2.3.6.4	In the event a site selected for the AP1000 design exceeds the hypothetical reference X/Q values, the COL applicant must demonstrate that the radiological consequences associated with the controlling design-basis accident using its site-specific X/Q values continue to meet the dose requirements pursuant to Title 10 of the Code of Federal Regulations (10 CFR) Section 50.34.
2.3.5-1	2.3-5	2.3.6.5	In the event a site selected for the AP1000 design exceeds the hypothetical reference X/Q value, the COL applicant should demonstrate that the radiological consequences associated with using its site-specific X/Q values comply with 10 CFR Part 20 regarding dose to the public and also maintain doses ALARA as specified in Appendix I to 10 CFR Part 50.
No COL Action item number assigned, see page 2-6.	2.4-1	2.4.1.1	The COL applicant will provide site specific information related to hydrological engineering.

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"Cross-Reference of Items Identified in the DSER
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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see pages 2-6 and 2-7.	2.4-2	2.4.1.2	The COL applicant will provide detailed site-specific information on all other hydrological safety related issues indicated below, including the effects of intense local precipitation: • Floods • PMP on Streams and Rivers • Potential Dam Failures • Probable Maximum Surge and Seiche Flooding • Probable Maximum Tsunami Flooding • Ice Effects • Channel Diversions • Flooding Protection Requirements
No COL Action item number assigned, see page 2-7.	2.4-4, 2.5-8	2.4.1.4, 2.5.4.6.4	The COL applicant will provide detailed site-specific information on groundwater.
No COL Action item number assigned, see page 2-7.	2.4-3	2.4.1.3	The COL applicant will provide detailed site-specific information on the cooling water supply and cooling water canals and reservoirs.
No COL Action item number assigned, see page 2-7.	2.4-5	2.4.1.5	The COL applicant will provide detailed site-specific information on Accidental Releases of Liquid Effluents in Ground and Surface Waters.
No COL Action item number assigned, see page 2-7.	2.4-6	2.4.1.6	The COL applicant will provide detailed site-specific information on technical specifications and emergency operation requirements.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see pages 2-8 and 2-9.	2.5-1, 2.5-5, 2.5-6	2.5.1, 2.5.4.6.1, 2.5.4.6.2	The COL applicant, without an ESP, will provide site specific geological, seismological and geophysical information related to tectonic or seismic, non-tectonic deformation, conditions caused by human activities in the region of the site, and areas local to the site. With respect to site geology, it is necessary to determine whether geologic features underlying the site affects of the foundation design as they relate to: • dynamic behavior during prior earthquakes • zones of alteration, irregular weathering, or zones of structural weakness • unrelieved residual stresses in bedrock • materials that could be unstable because of their mineralogy or unstable physical • properties • effect of human activities in the area
No COL Action item number assigned, see page 2-9.	2.5-2	2.5.2.1	The COL applicant, without an ESP, will provide site specific information related to seismicity, geologic and tectonic characteristics of the site and region, correlation of earthquake activity with seismic sources, probabilistic seismic hazard analysis, controlling earthquakes, seismic wave transmission characteristics of the site, and the safe shutdown earthquake ground motion.
No COL Action item number assigned, see page 2-9.	2.5-11	2.5.4.6.8	The COL applicant will demonstrate that the lateral earth pressures from the site specific construction technique does not exceed the AP1000 certified design values as specified in the interface requirement
No COL Action item number assigned, see page 2-10.	2.5-4	2.5.3	The COL applicant will address surface and subsurface geological and geophysical information including the potential for surface or near-surface faulting affecting the site.
No COL Action item number assigned, see page 2-10.	2.5-7, 2.5-9, 2.5-10, 2.5-12, 2.5-13	2.5.4.6.3, 2.5.4.6.6, 2.5.4.6.7, 2.5.4.6.10, 2.5.4.6.11	The COL applicant will provide site specific information related to the geotechnical characteristics of the site to demonstrate that they bound the design analyses assumptions given in DCD Tier 2 Table 2-1.

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(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see page 2-12.	2.5-9	2.5.4.6.6	The COL applicant will demonstrate that the potential for liquefaction is negligible.
No COL Action item number assigned, see page 2-13.	2.5-6	2.5.4.6.2	The COL applicant will demonstrate that the subgrade is uniform at the foundation level.
No COL Action item number assigned, see page 2-14.	2.5-14	2.5.5	The COL applicant will address site-specific information about static and dynamic stability of soil and rock slopes, the failure of which could adversely impact the safety of the nuclear island.
No COL Action item number assigned, see page 2-14.	2.5-15	2.5.6	The COL applicant to address site-specific information about embankments and dams, the failure of which could adversely impact the safety of the nuclear island.
No COL Action item number assigned, see page 3-9.	3.3-1	3.3.3	The COL applicant will address site interface criteria for wind and tornado.
No COL Action item number assigned, see page 3-12.	3.4-1	3.4.3	The COL applicant will evaluate events leading to potential flooding and demonstrate that the design will fall within the values of these site parameters.
No COL Action item number assigned, see page 3-32.	3.5-1	3.5.4	The COL will address site-specific missiles. If an accident is identified for which the probability of severe consequences is unacceptable, specific changes to the AP1000 plant will be identified in the COL application.
No COL Action item number assigned, see page 3-46.	3.6-1	3.6.4.1	The COL applicant will complete the final pipe whip restraint design and address as-built reconciliation of the pipe break hazards analysis in accordance with the criteria outlined in the DCD.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see page 3-47.	3.6-2	3.6.4.2	The COL applicant will verify that the as-designed piping satisfies the LBB criteria by demonstrating that the calculated normal and maximum stresses using the as-designed loading for the piping would be below the BACs presented in DCD Tier 2 Figures 3B-1 to 3B-21.
No COL Action item number assigned, see page 3-47.	3.6-3	3.6.4.3	Verification of the preliminary LBB analysis will be completed by the COL based on actual material properties and final, as-built piping analysis as part of ITAAC associated with 10 CFR Part 52 prior to fuel loading.
No COL Action item number assigned, see page 3-52.	3.6-4	3.6.4.4	The COL applicant will implement inspection plans, evaluation criteria, and other types of measures imposed on or adopted by operating PWRs with currently approved LBB applications as part of the resolution of concerns regarding the potential for PWSCC in those units.
No COL Action item number assigned, see page 3-58.	2.5-3	2.5.2.3	The COL applicant will demonstrate that the future potential site conditions will fall within the parameters for which the AP1000 is designed.
No COL Action item number assigned, see page 3-78.	3.7-1	3.7.5.1	The COL applicant will, using the site-specific SSE, evaluate the safety of existing and new dams whose failure could affect the site flood level
3.7.2.16-1	2.2-3	2.5.2.3	The COL applicant will perform site-specific soil structure interaction analyses to demonstrate acceptability of sites that have seismic and soil characteristics outside of the site parameters in DCD Tier 2 Table 2-1.
No COL Action item number assigned, see page 3-85.	3.7-5	3.7.4.2.1, 3.7.5.5	The COL applicant will determine the location of the free-field acceleration sensor.
No COL Action item number assigned, see page 3-86.	3.7-2	3.7.5.2	The COL holder operations and engineering departments will use the recorded seismic data to evaluate the effects of the earthquake on the plant structures and equipment.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see page 3-99.	3.8-1	3.8.6.1	The final design of containment vessel elements (reinforcement) adjacent to concentrated masses (penetrations) will be completed by the COL applicant and documented in the ASME Code design report.
No COL Action item number assigned, see page 3-103.	3.8-4	3.8.2.7, 3.8.6.4	Inservice inspection of the containment vessel will be performed according to the ASME Code Section XI, Subsection IWE, and is the responsibility of the COL applicant.
No COL Action item number assigned, see page 3-132.	3.8-3	3.8.6.3	The COL applicant is responsible for the as-built summary report.
No COL Action item number assigned, see page 3-185.	3.9-1	3.9.8.1	Confirmation of the reactor internals vibration levels by the COL applicant must be demonstrated and verified by comparison of the predicted responses included in the report with the AP1000 prototype plant pre-operational instrumented hot functional program test and inspection results using ITAAC. Any significant anomalies between the predicted vibration assessment responses and the measured vibration test results and internals inspections should be identified to the NRC and reconciled prior to plant operation.
No COL Action item number assigned, see page 3-199.	3.9-3	3.9.8.3	The COL applicant will develop a program to verify the operability of snubbers.
No COL Action item number assigned, see page 3-212.	3.9-4	3.9.8.4	The development of a complete plant-specific IST program is outside the scope of design certification and is the responsibility of the COL applicant.
No COL Action item number assigned, see page 3-215.	3.10-1	3.10.6	The COL applicant, as a part of the COL application, will identify equipment qualified on the basis of experience, and include details of the methodology and the corresponding experience data for each piece of equipment.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see page 3-217.	3.11-1	3.11.5	The COL applicant will establish and maintain the equipment qualification file, including the individual EQDP and seismic test reports, during the equipment selection and procurement phase.
No COL Action item number assigned, see page 3-225.	3.9-2	3.9.8.2	The COL applicant or his agent will complete the design specifications and design reports.
No COL Action item number assigned, see page 3-231.	3.7-3	3.7.5.3	The COL applicant will update the seismic interaction review.
No COL Action item number assigned, see page 3-232 and 3-235.	3.9-6	3.9.8.6	The COL applicant will implement the NRC benchmark program, using AP1000 specific problems, if a piping design program other than those used for design certification is used.
No COL Action item number assigned, see page 3-245.	3.9-2	3.9.8.2	The COL applicant will complete the final stress analysis of the ASME components and piping systems as part of the COL application.
No COL Action item number assigned, see page 3-247.	3.9-5	3.9.8.5	A monitoring program will be implemented by the COL holder at the first AP1000 to record temperature distributions and thermal displacements of the surge line piping, as well as pertinent plant parameters such as pressurizer temperature and level, hot leg temperature, and reactor coolant pump status.
4.2.8-1	4.2-1 4.3-1 4.4-1	4.2.5 4.3.4 4.4.7	The COL applicant, requesting any change to the initial reference design of the fuel, burnable absorber rods, rod cluster control assemblies, or initial core design, will submit a detailed description of any proposed change for prior NRC review and approval.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
4.4-1	4.4-2	4.4.7	Upon installation of the actual instrumentation, the COL applicant will evaluate the instrumentation uncertainties of the operating parameters, and confirm that either the design limit DNBR values as described in DCD Tier 2 Section 4.4, "Thermal and Hydraulic Design," and the response to RAI 440.022, Revision 1 remains valid, or the safety analysis minimum DNBR bounds the new design limit DNBR values plus DNBR penalties, such as rod bow penalty.
4.5.1-1	5.2-2	5.2.6.2	The COL applicant will address the information on preservice examinations of the reactor vessel closure head.
4.5.1-2	5.2-2	5.2.6.2	The COL applicant will perform analyses and inservice inspections and provide reports and notifications equivalent to those contained in Sections IV.A to IV.F of NRC Order EA-03-009, "Interim Inspection Requirements for Reactor Pressure Vessel Heads at PWRs." These activities should include susceptibility calculations and categorization, visual, surface and volumetric examinations, and preparation of reports and notifications.
4.5.2-1	3.9-2	3.9.8.2 4.5.2.1	The COL applicant will address the findings from the EPRI/MRP reactor internals program applicable to the AP1000 reactor internals design.
No COL Action item number assigned, see page 5-10.	5.2-1	5.2.6.1	The COL applicant will ensure that the design is consistent with the construction practices (including inspection and examination methods) of the ASME Code edition and addenda, as endorsed in 10 CFR 50.55a. The COL applicant will address consistency of the design with the construction practices (including inspection and examination methods) of the later ASME Code edition and addenda.
No COL Action item number assigned, see page 5-15.	5.3-1	5.3.6.1	The COL applicant will address the use of plant-specific P/T limit curves relative to the RV material composition during procurement of the RV, as well as the evaluation of the LTOP system, including evaluating the setpoint pressure for the RNS relief valve.
5.3.2-1	5.3-3	5.3.6.3	The COL applicant will perform an analysis of the capsule/holder model, in order to confirm the proposed surveillance capsule lead factors and azimuthal locations.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see page 5-81.	16.3-1	16.3.2	The COL applicant will to develop and implement procedures consistent with the availability controls.
6.1.2-1	6.1-2	6.1.3.2	The COL applicant will provide a program for the control of the use of Service Level I and Service Level III coatings.
No COL Action item number assigned, see page 6-42.	6.6-1	6.6.9.1	As part of the preoperational and inservice testing programs, the COL applicant is responsible for verifying that the response time of the procured hydrogen concentration monitoring subsystem meets the recommendations of Item II.F.1 of NUREG-0737, "Clarification of TMI Action Plan Requirements."
6.2.6-1	6.2-1	6.2.6	The COL applicant will develop and submit a containment leak rate testing program.
No COL Action item number assigned, see page 6-96.	6.4-1	6.4.7	The COL applicant is responsible for the amount and location of possible sources of toxic chemicals in or near the plant and for seismic Category 1, Class 1E toxic gas monitoring, as required (detectors where necessary to permit automatic isolation of the control room).
No COL Action item number assigned, see page 6-97.	6.4-2	6.4.7	The COL applicant is responsible for verifying that the procedures, and training for control room habitability are consistent with the intent of GSI 83.
No COL Action item number assigned, see page 6-99.	6.4-3	6.4.7	The COL applicant will provide the testing frequency for the main control room inleakage test.
6.4-1[(1)]	6.4-1	6.4.7	The COL applicant will evaluate the possible harmful effects to control room personnel from toxic chemicals located at or near the site.
No COL Action item number assigned, see page 6-104.	6.6-1	6.6.9.1	The COL applicant will prepare a preservice inspection program and an ISI program for ASME Code, Section III, Class 2 and 3 systems, components, and supports.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see page 6-104.	6.6-2	6.6.9.2	The COL applicant will address the controls to preserve accessibility and inspectability for ASME Code, Section III, Class 2 and 3 components and piping during construction or other post design certification activities.
No COL Action item number assigned, see page 6-106.	6.6-1	6.6.9.1	The COL applicant will develop an augmented inspectionprogram for high-energy fluid system piping between containment isolation valves.
7.1.7-1	7.1-2	7.1.6	The COL applicant will commit that any change to the software commercial dedication process of the safety-related system requires NRC review and approval before implementation.
7.2.7-1	7.1-1	7.1.6	The accuracy and response time of the AP1000 safety systems will be commensurate with the Chapter 15 safety analysis. The COL applicant is responsible for the setpoint analysis.
7.2.3-1	7.2-1	7.2.3	The COL applicant will perform an FMEA for each AP1000 safety system. The FMEAs will confirm that no single failure of a safety system component will defeat more than one of the four protective channels, assuring proper protective action at the system level.
7.2.3-2	7.1-1	7.1.6	The COL applicant will provide a calculation of setpoints for protective functions.
7.2.6-1	7.2-1	7.2.3	The AP1000 TS for the values that rely on the FMEA for their basis will use brackets around the reference value in the "Completion Time" column. The COL applicant will provide an FMEA for the protection and safety monitoring system.
7.2.7-1	7.1-1	7.1.6	The COL applicant will provide the plant specific trip setpoints, based on the specific I&C system design and equipment installed and update TS tables 3.3.1-1 and 3.3.2-1, accordingly.
8.2.3-1	8.2-2	8.2.5	The COL applicant will determine the operating voltage for the high side of the transformer and transmission switchyard and the frequency decay rate.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
8.2.3.1-1	8.2-2	8.2.2 8.2.5	The COL applicant will perform a grid stability analysis to show that the grid will stay stable and the RCP bus voltage will remain above the voltage required to maintain the flow assumed in the DCD Tier 2 Chapter 15 analyses for a minimum of 3 seconds following a turbine trip.
8.2.3.1-2	8.2-2	8.2.5	The COL applicant will set the protective devices controlling the switchyard breakers with consideration given to preserving the grid connection following a turbine trip.
8.2.3.1-3	No COL item has been created in the DCD pending resolution of DSER Open Item 8.2.3.1-1, Revision 1		Because of certain electrical failures (such as a loss of isophase bus) power from the generator or grid may not be available to the RCPs for a minimum of 3 seconds following a turbine trip. The COL applicant must perform a failure modes and effects analysis (FMEA) to ensure that the design provides power to the RCPs for a minimum of 3 seconds following a turbine trip. If the power to the RCPs cannot be maintained for 3 seconds, then the DCD Tier 2 Chapter 15 analysis should be re-analyzed and provided to the staff for review. This is COL Action Item 8.2.3.1-3. Inclusion of this COL information in the DCD is Open Item 8.2.3.1-1.
8.2.3.3-1	8.2-1	8.2.5	The COL applicant will address the design of ac power transmission system and its testing and inspection plan.
8.3.1.2-1	8.3-2	8.3.3	The COL applicant will maintain the diesel generators in accordance with the requirements of the overall plant maintenance program.
8.3.1.6-1	8.3-1	8.3.3	The COL applicant will provide the design of the direct lightning protection and the associated grounding.
8.4.1-1	8.3-2	8.3.3	The COL applicant will address the provisions for periodically testing penetration protective devices.
9.4.1-1	9.4-1	9.4.12	The COL applicant will implement a program to maintain compliance with ASME/ANSI AG-1-1997, "Code on Nuclear Air and Gas Treatment," and Addenda AG-1a-2000, "Housings;" ASME N509-1989, "Nuclear Power Plant Air-Cleaning Units and Components;" ASME N510-1989; and RG 1.140, Revision 2, for portions of the VBS and VFS identified in DCD Tier 2 Sections 9.4.1 and 9.4.7.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
9.5.1-1(a)	9.5-1	9.5.1.8	The COL applicant will establish a fire protection program at the facility for the protection of structures, systems, and components important to safety, and the procedures, equipment and personnel required to implement the program.
9.5.1-1(b)	9.5-1	9.5.1.8 Table 9.5.1-1	The implementation of the fire protection program prior to receiving fuel onsite for fuel storage areas, and for the entire unit prior to reactor startup is the responsibility of the COL applicant.
9.5.1-1(c)	9.5-1	9.5.1.8 Table 9.5.1-1	The establishment of administrative controls to maintain the performance of the fire protection systems and personnel is the responsibility of the COL applicant.
9.5.1-1(d)	9.5-1	9.5.1.8 Table 9.5.1-1	The establishment of a site fire brigade trained and equipped for fire fighting to ensure adequate manual fire fighting capability for all plant areas containing structures, systems, or components important to safety is the responsibility of the COL applicant.
9.5.1-1(e)	9.5-1	9.5.1.8 Table 9.5.1-1	The establishment of a quality assurance program to ensure that the guidelines for the design, procurement, installation and testing, and the administrative controls for fire protection systems are satisfied is the responsibility of the COL applicant.
9.5.1-1(f)	9.5-1	9.5.1.8 Table 9.5.1-1	Inspection and maintenance of fire doors, access to keys for the fire brigade, and the marking of exit routes is the responsibility of the COL applicant.
9.5.1-1(g)	9.5-1	9.5.1.8 Table 9.5.1-1	The collection and sampling of water drainage from areas that may contain radioactivity is the responsibility of the COL applicant.
9.5.1-1(h)	9.5-1	9.5.1.8 Table 9.5.1-1	The control of the use of compressed gases inside structures is the responsibility of the COL applicant.
9.5.1-1(i)	9.5-1	9.5.1.8 Table 9.5.1-1	Portable radio communication for use by the plant fire brigade is the responsibility of the COL applicant.
9.5.1-1(j)	9.5-1	9.5.1.8 Table 9.5.1-1	Fire protection inside containment during refueling and maintenance is the responsibility of the COL applicant.
9.5.1-1(k)	9.5-1	9.5.1.8 Table 9.5.1-1	The control of combustible materials in the remote shutdown workstation is the responsibility of the COL applicant.
9.5.1-1(l)	9.5-1	9.5.1.8 Table 9.5.1-1	Fire protection for cooling towers is the responsibility of the COL applicant.

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DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
9.5.1-1(m)	9.5-1	9.5.1.8 Table 9.5.1-1	The proper storage of welding gas cylinders is the responsibility of the COL applicant.
9.5.1-1(n)	9.5-1	9.5.1.8 Table 9.5.1-1	The proper storage of ion exchange resins is the responsibility of the COL applicant.
9.5.1-1(o)	9.5-1	9.5.1.8 Table 9.5.1-1	The proper storage of hazardous chemicals is the responsibility of the COL applicant.
9.5.1-2	9.5-2	9.5.1.8	The revision of the fire hazard analysis to reflect the actual plant configuration is the responsibility of the COL applicant.
9.5.1-3	9.5-4	9.5.1.8	The COL applicant is responsible for ensuring that any deviations from the applicable NFPA codes and standards in addition to those specified in the DCD, are incorporated into the final safety analysis report (FSAR) with appropriate technical justification.
9.5.2-1	9.5-7	9.5.2.5.2	The COL applicant is responsible for the emergency offsite communication systems, including the crisis management radio system.
9.5.2-2	9.5-8	9.5.2.5.3	The COL applicant is responsible for the specific details of the security communication system, including testing.
9.5.2-3	9.5-6	9.5.2.5.1	The COL applicant will address the issue of Bulletin BL-80-15 for recommendations of loss of the emergency notification system due to a loss of offsite power.
No COL Action item number assigned, see page 9-113.	13.6-3	13.6.13.3	The security lighting system is site-specific and will be addressed by the COL applicant.
10.3.2.1	10.1-1	10.1.3	The COL applicant will address preparation of an erosion-corrosion monitoring program for carbon steel portions of the steam and power conversion systems that contain water or wet steam.
10.5.1	10.1-1	10.1.3	The COL applicant will address preparation of an erosion-corrosion monitoring program for carbon steel portions of the steam and power conversion systems that contain water or wet steam. This monitoring program will address industry guidelines and the requirements included in Generic Letter 89-08.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
10.5.2	10.2-1	10.2.6	The COL applicant will submit to the staff for review and approval within 3 years of obtaining a Combined License, and then implement a turbine maintenance and inspection program. The program will be consistent with the maintenance and inspection program plan activities and inspection intervals identified in DCD Subsection 10.2.3.6. The COL applicant will have available plant-specific turbine rotor test data and calculated toughness curves that support the material property assumptions in the turbine rotor analysis.
10.5.3.	10.4-1	10.4.12.1	The COL applicant will address the final configuration of the plant circulating water system including piping design pressure, the cooling tower or other site-specific heat sink. As applicable, the COL applicant will address the acceptable Langelier or Stability Index range, the specific chemical selected for use in the CWS water chemistry control, pH adjuster, corrosion inhibitor, scale inhibitor, dispersant, algaecide and biocide applications reflecting potential variations in site water chemistry and in micro macro biological life forms.
10.5.4	10.4-2	10.4.12.2	The COL applicant will address the oxygen scavenging agent and pH adjuster selection for the turbine island chemical feed system.
10.5.5	10.4-1	10.4.12.1	The COL applicant will address the specific biocide.
No COL Action item number assigned, see page 11-7	11.2-3	11.2.5.3	The COL applicant will identify the types of liquid waste ion exchange and adsorbent media to be used in the WLS.
No COL Action item number assigned, see pages 11-8, 11-31	11.2-4	11.2.5.4	The COL applicant will determine the rate of discharge and the dilution necessary to maintain acceptable concentration in compliance with local requirements.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see pages 11-9, 11-12, 11-14, 11-31, 11-34	11.5-1	11.5.7	The COL applicant will develop a plant-specific offsite dose calculation manual to address operational setpoints for the radiation monitors, and to address programs for monitoring and controlling the release of radioactive material into the environment, which eliminates the potential for unmonitored and uncontrolled release.
No COL Action item number assigned, see pages 11-9, 11-12, 11-31	11.2-2	11.2.5.2	The COL applicant will demonstrate conformance with RG 1.110, as it relates to performing a site-specific cost-benefit analysis for reducing dose.
No COL Action item number assigned, see page 11-11	11.2-1	11.2.5.1	The COL applicant will discuss how any mobile processing equipment intended for use in the processing of liquid radwaste meets the guidelines of RG 1.143.
No COL Action item number assigned, see page 11-14	11.3-2	11.3.5.2	The COL applicant will identify the types of adsorbent media to be used in the WGS.
No COL Action item number assigned, see pages 11-18, 11-19, 11-31	11.3-1	11.3.5.1	The COL applicant will provide a site-specific cost-benefit analysis to address the requirements of 10 CFR Part 50, Appendix I, regarding population doses resulting from gaseous effluents.
No COL Action item number assigned, see pages 11-22, 11-24, 11-25, 11-26	11.4-1	11.4.6	The COL applicant will submit a process control program that identifies the operating procedures for processing wet solid wastes.
11.4-1[4]	11.4-1	11.4.6	For Generic Letters 81-38 and 81-39, the COL applicant will address storage of low-level radioactive waste.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
No COL Action item number assigned, see page 11-31	11.5-3	11.5.7	The COL applicant is responsible for addressing the 10 CFR Part 50, Appendix I guidelines for offsite individual doses and population doses via liquid and gaseous effluents.
No COL Action item number assigned, see page 11-32	11.5-2	11.5.7	The COL applicant is responsible for demonstrating that the process and effluent monitoring and sampling programs conforms to the guidelines of ANSI N13.1, RG 1.21 and RG 4.15.
12.2.1-1	12.1-1	12.1.3	The COL applicant will address operational ALARA concerns and will submit an operational ALARA policy which conforms to the requirements of 10 CFR Part 20 and the recommendations of RG 1.8, Revision 2, RG 8.8, and RG 8.10, Revision 1-R.
12.2.3-1	12.1-1	12.1.3	The COL applicant will address operational considerations of the SRP to the level of detail provided in RG 1.70 and will address the following Regulatory Guides in its application: 8.2, 8.7, 8.9, 8.13, 8.15, 8.20, 8.25, 8.26, 8.27, 8.28, 8.29, 8.34, 8.35, 8.36, and 8.38.
12.3.1-1	12.2-1	12.2.3	The COL applicant will address any additional contained radiation sources not identified in DCD Tier 2 Section 12.2.1, including radiation sources used for instrument calibration or radiography.
12.4.2-1	12.3-1	12.3.5	The COL applicant will address the administrative controls for use of the design features provided to control access to radiologically restricted areas, including potentially very high radiation areas, such as the reactor cavity and the fuel transfer canal during refueling operations. The hatch to the spent fuel transfer canal will be treated as an entrance to a very high radiation area under 10 CFR Part 20 and will be locked during spent fuel transfer operations.
12.4.4-1	12.3-2	12.3.5	The COL applicant will address the criteria and methods for obtaining representative measurement of radiological conditions, including airborne radioactivity concentrations in work areas (Item III.D.3.3 of NUREG-0737). The COL applicant will also address the use of portable instruments, and the associated training and procedures, to accurately determine the airborne concentrations in areas within the facility where plant personnel may be present during an accident.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
12.6-1	12.5-1	12.5.5	The COL applicant will address the organization and procedures used for adequate radiological protection and will provide methods so that personnel radiation exposures will be maintained ALARA.
No COL Action item number assigned, see page 13-1.	13.1-1	13.1.1	The organizational structure is the responsibility of the COL applicant.
No COL Action item number assigned, see page 13-1.	13.2-1	13.2.1	The COL will develop and implement training programs for plant personnel.
13.3-1	13.3-1	13.3.1	The COL applicant will address emergency planning including post-72 hour actions and its communication interface.
No COL Action item number assigned, see page 13-8.	13.3-2	13.3.1	The COL applicant will address the activation of the emergency operations facility consistent with current operating practice and NUREG-0654/FEMA-REP-1 except for a loss of offsite power and loss of all onsite AC power. For this initiating condition, the COL applicant will immediately activate the emergency operations facility rather than bringing it to a standby status.
No COL Action item number assigned, see page 13-18.	13.4-1	13.4.1	The operational review is the responsibility of the COL applicant.
13.5.1-1[(2)]	13.5-1	13.5.1	The COL applicant is responsible for plant procedures.
No COL Action item number assigned, see page 13-19.	13.6-1	13.6.13.2	The COL applicant is responsible for the security plan.
14.4-1	14.4-1	14.4.1	The specific staff, staff responsibilities, authorities and personnel qualifications for performing the AP1000 initial test program are the responsibility of the COL applicant.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
14.4-2	14.4-2	14.4.2	The COL applicant is responsible for providing test specifications and test procedures for the preoperational and startup tests, as identified in subsection 14.2.3, for review by the NRC.
14.4-3	14.4-3	14.4.3	The COL applicant is responsible for a startup administration manual (procedure) which contains the administration procedures and requirements that govern the activities associated with the plant initial test program, as identified in subsection 14.2.3.
14.4-4	14.4-4	14.4.4	The COL applicant is responsible for review and evaluation of individual test results. Test exceptions or results that do not meet acceptance criteria are identified to the affected and responsible design organizations, and corrective actions and retest, as required, will be performed.
14.4-5	14.4-5	14.4.5	The COL applicant is responsible for testing that may be required of structures and systems that are outside the scope of the design certification. Test Specifications and acceptance criteria are provided by the responsible design organizations as identified in subsection 14.2.3.
14.4-6	14.4-6	14.4.6	The COL applicant for the first plant and the first three plants will perform the tests listed in subsection 14.2.5. For subsequent plants, the COL applicant will either perform the tests listed in subsection 14.2.5, or will provide a justification that the results of the first-plant-only tests or the first-three-plant tests are applicable to the subsequent plant.
15.1.5-1	7.1-1	7.1.6	The COL applicant will evaluate and confirm the validity of the safety analysis documented in the DCD using plant specific setpoints and instrument uncertainties, including the SG mid-deck level measurement uncertainty. The COL applicants will submit in the plant specific applications the setpoint analysis and the associated safety analysis for the staff to review and approve.
15.3.8-1	15.7-1	15.7.6	The COL applicant will perform a site-specific offsite radiological consequence analysis, including the corresponding source term resulting from a postulated liquid tank failure.
16.2-1	16.1-1	16.1	The COL applicant will provide the plant-specific values or alternative text in the TS locations signified by brackets.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
17.1-1	17.5-1, 17.5-2	17.5	The COL applicant will address its quality assurance (QA) program for the design phase, as well as its QA program for procurement, fabrication, installation, construction and testing of structures, systems, and components (SSCs) in the facility.
17.2-1	17.5-4	17.5	The COL applicant will address its QA program for operations.
17.5-1	17.5-1, 17.5-2	17.5	The COL applicant will address its design phase Quality Assurance program, as well as its Quality Assurance Program for procurement, fabrication, installation, construction, and testing of structures, systems and components in the facility. The quality assurance program will include provisions for seismic Category II structures, systems and components.
17.5-2	17.5-3	17.5	The COL applicant will establish PRA importance measures, the expert panel process, and the other deterministic methods to determine the site-specific list of SSCs under the scope of RAP.
17.5-3	17.5-8	17.5	The COL applicant is responsible for integrating the objectives of the O-RAP into Quality Assurance Program developed to implement 10 CFR [Part] 50, Appendix B.
17.5-4	17.5-4	17.5	The COL applicant will address its Quality Assurance program for operations.
17.5-5	17.5-5, 17.5-6	17.5	The COL applicant is responsible for performing the tasks necessary to maintain the reliability of risk-significant SSCs. The Maintenance Rule (10 CFR 50.65) is relevant to the COL applicant's maintenance activities in that it describes SSC performance related goals during plant operation.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
17.5-6	17.5-7	17.5	The COL applicant is responsible for performing O-RAP activities. In addition to performing the specific tasks necessary to maintain SSC reliability at its required level, the O-RAP activities include: • Reliability database - Historical data available on equipment performance. The compilation and reduction of this data provides the plant with source of component reliability information. • Surveillance and testing - In addition to maintaining the performance of the components necessary for plant operations, surveillance and testing provides a high degree of reliability for the safety-related SSCs. • Maintenance plan - This plan describes the nature and frequency of maintenance activities to be performed on plant equipment. The plan includes the selected SSCs identified in the D-RAP.
18.2.3.1-1	18.2-2	18.2.6	The COL applicant is responsible for designing the EOF, including specification of a location, in accordance with the AP1000 human factors engineering program.
18.2.4-1	18.2-1	18.2.6	The COL applicant is responsible for the execution of the NRC approved human factors engineering program.
18.5.3-1	18.5-2	18.5.4	The COL applicant will document the scope and responsibilities of each main control room position, considering the assumptions and results of the task analysis.
18.5.3-2	18.5-1	18.5.4	The COL applicant will utilize the AP1000-specific task analysis information, in the development of procedures and training programs.
18.5.3-3	18.5-1	18.5.4	The COL applicant will use the task analysis methodology to conduct a complete task analysis.
18.6.3-1	18.6-1	18.6.1	The COL applicant will (1) address the staffing considerations in NUREG-0711and (2) to identify the minimum documentation that the COL applicant will provide to the staff to complete its review.
18.6.4-1	18.6-1	18.6.1	The COL applicant will address staffing and qualifications with applicable issues addressed.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
18.7.3-1	18.7-1	18.7.1	The COL applicant will generate a report documenting the results of the exercises intended to validate the HRA performance assumptions and submitted it to the NRC for review.
18.7.4-1	18.7-1	18.7.1	The COL applicant is responsible for the execution and documentation of the human reliability analysis/human factors engineering integration implementation plan.
18.8.1.4-1	18.8-1	18.8.5	The COL applicant is responsible for the execution and documentation of the human system interface design implementation plan.
18.9.3-1	18.9-1	18.9.1	The COL applicant will (1) address the procedure development considerations in NUREG-0711and (2) identify the minimum documentation that the COL applicant will provide to the staff to complete its review.
18.9.4-1	18.9-1	18.9.1	The COL applicant will address the procedure development as part of post-design certification issues.
18.9-2[5]	18.9-1	18.9.1	The COL applicant will develop plant-specific EOPs using the ERGs.
18.10.3-1	18.10-1	18.10.1	The COL applicant is responsible for development of the training program.
18.10.4-1	18.10-1	18.10.1	The COL applicant is responsible for development of the training program.
18.11.4-1	18.11-1	18.11.1	The COL applicant is responsible for developing, documenting, and executing the implementation plan for the verification and validation of the AP1000 human factors engineering program.
18.13-1	18.14-1	18.14	The COL applicant is responsible for human performance monitoring.
19.1.1-1	19.59.10-2	19.59.10.5, Table 19.59-18, Item 45	The design-specific PRA, developed as part of the design certification process, should be revised to account for site-specific information, as-built (plant-specific) information refinements in the level of design detail, technical specifications (TS), plant specific emergency operating procedures, and design changes.
19.1.3.1-1	17.5-3, 17.5-5, 19.59.10-2	17.4, 17.5, 19.59.10.5, Table 19.59-18, Item 44	The COL applicant is responsible for developing a list of important SSCs that will be incorporated in the D-RAP program and including this list in DCD Tier 2 Chapter 17.4.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
19.1.3.1-2	18.7-1, 19.59.10-2	18.7.1, 19.59.10.5, Table 19.59-18, Item 11	The COL applicant is responsible for developing a list of risk-important operator tasks that should be taken into account in the control room design as well as for implementing procedures and developing training programs. The COL applicant should take this list into account in developing and implementing procedures, training and other human reliability related programs.
19.1.3.1-3	18.7-1	18.7.1	During the main control room validation process, the COL applicant should qualitatively confirm that the "findings" from the integrated system validation do not lead to a risk-significant increase in error potential over that represented in the AP1000 PRA HRA. If this is not confirmed, the COL applicant should model the additional risk-significant errors in an updated HRA.
19.1.5-1	19.59.10-2	19.59.10.5, Table 19.59-18, Item 45	The COL applicant will perform a site-specific PRA-based analysis of external flooding, hurricanes, or other external events pertinent to the site to search for site-specific vulnerabilities.
19.1.5-2	19.59.10-1	19.59.10.5	The COL applicant will confirm, during a seismic walkdown of the as-built plant, that the "generic" HCLPF values assumed in the SMA are not inappropriately low.
19.1.5-3	19.59.10-3	19.59.10.5	The COL applicant will provide an updated internal fires PRA that takes into account design details (e.g., cable routing, door and equipment locations and fire detection and suppression system locations) to search for internal fire vulnerabilities in the detailed design.
19.1.5-4	19.59.10-3	19.59.10.5	The COL applicant will provide an updated internal flood PRA that takes into account design details (e.g., pipe routing, door locations, and flood barriers) to search for internal flooding vulnerabilities in the detailed design. This is COL Action Item 19.1.5-4.
19.1.8-5	13.2-1, 13.5-1, 19.59.10-2	13.2.1, 13.5.1, 19.59.10.5, Table 19.59-18, Item 45	The COL applicant is responsible for developing procedures and training to address the ability to close containment hatches and penetrations following an accident during Modes 5 and 6, before steam is released into the containment.
19.1.8-6	13.5-1, 19.59.10-2	13.5.1, 19.59.10.5, Table 19.59-18, Item 73	The COL applicant will provide administrative controls to control foreign debris from being introduced into the containment during maintenance and inspection operations, to prevent plugging of the containment sump screens.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
19.1.8-7	13.2-1, 13.5-1, 19.59.10-2	13.2.1, 13.5.1, 19.59.10.5, Table 19.59-18, Item 62	The COL applicant will have procedures and policies to maximize the availability of the non-safety-related wide range pressurizer level indication (cold calibrated) during RCS draining operations during cold shutdown. Training will be given to the operators on how to use this indication to identify inconsistencies in the safety-related hot-leg level instrumentation to prevent RCS overdraining.
19.1.8-9	13.5-1, 19.59.10-2	13.5.1, 19.59.10.5, Table 19.59-18, Item 76	The COL applicant will have policies that maximize the availability of RNS V-023 and procedures to open this valve during cold shutdown and refueling operations when the RCS is open and the PRHR cannot be used for core cooling.
19.1.8-10	13.5-1, 19.59.10-2	13.5.1, 19.59.10.5, Table 19.59-18, Item 67	The COL applicant will have administrative controls to ensure that inadvertent opening of RNS valve V024 is unlikely since inadvertent opening results in a draindown of RCS inventory to the IRWST and requires gravity injection from the IRWST.
19.1.8-11	18.7-1	18.7.1	The COL applicant will take into account that inadvertent opening of RNS valve V024 results in a draindown of RCS inventory to the IRWST and requires gravity injection from the IRWST in designing the control room.
19.1.8-12	13.5-1, 19.59.10-2	13.5.1, 19.59.10.5, Table 19.59-18, Item 71	The COL applicant will maintain procedures to respond to low hot leg level alarms. This is COL Action Item 19.1.8-12.
19.2.3-1	5.3-5	5.3.6.5	The COL applicant will be responsible for completing the design of the reactor vessel insulation system.
19.2.3.3.7-1	19.59.10-5	19.59.10.5	The COL applicant will perform a thermal response assessment of the as-built equipment used to mitigate severe accidents to provide additional assurance that this equipment can perform its severe accident functions during environmental conditions resulting from hydrogen burns. This assessment is COL Action Item 19.2.3.3.7-1.
19.2.5-1	13.5-1, 19.59.10-4	13.5.1, 19.59.10.5	The COL applicant will develop and implement severe accident management guidance and procedures.
19.3.2.1-1	13.5-1	13.5.1	The COL applicant will address plant procedures for normal and abnormal operations; emergency operation; refueling and outage planning; alarm response; maintenance; inspection; test and surveillance, as well as administrative controls.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
19.3.3-1	13.5-1	13.5.1	The COL applicant will develop plant specific guidelines that would reduce the potential for loss of RCS boundary and inventory when using freeze seals.
19.3.7-1	13.5-1	13.5.1	The COL applicant will develop plant procedures for normal and abnormal operations; emergency operation; refueling and outage planning; alarm response; maintenance; inspection; test and surveillance, as well as administrative controls.
19.3.7-2	13.5-1	13.5.1	The COL applicant is responsible for outage planning and control. The COL applicant will appropriately address the factors that improve low-power and shutdown operations.
19A.2-1[3]	19.59.10-1	19.59.10.5	The COL applicant will compare the as-built HCLPF to the seismic margin evaluation.
20.2-1	5.4-1	5.4.15	The development of the SG tube preservice inspection (PSI) and inservice inspection (ISI) programs is the responsibility of the COL applicant.
20.2-2	5.4-1	5.4.15	The development of the SG tube preservice inspection (PSI) and inservice inspection programs is the responsibility of the COL applicant.
20.3-1	USI/GSI	Table 1.9-2, Issue 142	Implementation of an annual program to inspect and test all electronic isolators between Class 1E and non-Class 1E systems is the responsibility of the COL license holder.
20.4-1	13.1-1	13.1.1	The COL applicant will be responsible for addressing Issue I.A.1.4.
20.4-2	USI/GSI	Table 1.9-2, Issues I.A.2.6(1) and I.A.4.1(2)	The COL applicant will be responsible for addressing Issues I.A.2.6(1) and I.A.4.1(2) and Generic Letter 91-15.
20.4-3	USI/GSI	Table 1.9-2, Issue II.J.3.1	For Issue II.J.3.1, the COL applicant will address the organization for the plant, the construction of the plant, and any modifications to the AP1000 certified design.
20.4-4	USI/GSI	Table 1.9-2, Issue II.J.4.1	For Issue II.J.4.1, the COL applicant will address plant procedures for adequate reporting in accordance with 10 CFR Part 21 and 10 CFR 50.55(e).
20.4-5	USI/GSI	Table 1.9-2, Issue II.J.4.1	For Issue II.K.1(26), the COL applicant will address the scope of examinations and criteria for licensing examinations, as well as new training requirements for operators.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
20.7-1	WCAP-15800	1.9.5.5	For Bulletin 80-06, the COL applicant will address verification of the as-built instrumentation and control system.
20.7-2	WCAP-15800	1.9.5.5	For Bulletin 80-15, the COL applicant will review the recommendations related to loss of offsite power and a consequential loss of the emergency notification system.
20.7-3	WCAP-15800	1.9.5.5	For Bulletins 80-20, and 96-01 and Generic Letters 85-06, 89-02, and 91-05 the COL applicant will address procurement and/or maintenance issues.
20.7-4	WCAP-15800	1.9.5.5	For Bulletin 89-03, the COL applicant should address operating procedures.
20.7-5	WCAP-15800	1.9.5.5	For Bulletin 96-01, the COL applicant will address incomplete rod insertion issues.
20.7-6	WCAP-15800	1.9.5.5	If a COL applicant chooses to perform its own safety analysis in the future, it will follow the guideline specified in GL-83-11, Supplement 1.
20.7-7	18.9-1	18.9.1	For Generic Letter 85-05, the COL applicants will develop plant-specific EOPs that address the boron dilution events.
20.7-8	WCAP-15800	1.9.5.5	For Generic Letter 88-05, the COL applicant will develop a boric acid corrosion program to provide reasonable assurance of compliance with the applicable regulatory requirements.
20.7-9	WCAP-15800	1.9.5.5	The COL applicant will review Generic Letters 89-15 and Appendix E to 10 CFR Part 50, Section VI 2(a)(i) regarding the Emergency Response Data System.
20.7-10	13.3-1	13.3.1	For Generic Letter 91-14, the COL applicant will address emergency planning, including post 72-hour actions and its communications interface.
20.7-11	See note 6		The COL applicant to provide the information requested in GL 92-01, Revision 1 and GL 92-01, Revision 1, Supplement 1.
20.7-12	9.5-6, 9.5-7	9.5.2.5.1, 9.5.2.5.2	For Generic Letter 93-01, the COL applicant will address emergency planning, including post 72-hour actions and its communications interface. Further, the emergency response facility communication system, including the crisis management radio system, will be addressed by the COL applicant.
20.7-13	13.5-1	13.5.1	For Generic Letter 93-04, the COL applicant will perform additional testing during operational phase of the plant.

Table 1

"Cross-Reference of Items Identified in the DSER
to Corresponding COL Action Item Identified in the AP1000 DCD"
(as of August 21, 2003)

DSER COL Action Item	DCD Table 1.8-2 Item Number	DCD Section	Description
20.7-14	13.5-1	13.5.1	The action of comparing electrical schematic drawings and logic diagrams against plant surveillance test procedures to ensure that the surveillance procedures fulfill the TS requirements are the responsibility of the COL applicant.
20.7-15	WCAP-15800	1.9.5.5	The COL applicants should address the degradation of Boraflex in the SFPSR as identified in GL-96-04, and assess the Boraflex capability to maintain a 5% subcriticality margin.
20.7-16	WCAP-15800	1.9.5.5	For Generic Letter 97-06, the COL applicant will need to develop a program for periodic monitoring of degradation of steam generator internals.
22.5.9-1	16.3-1	16.3.2	The COL applicant will develop a procedure to control the operability of investment protection SSCs in accordance with Table 16.3-2.

Notes:

1. On DSER page 9-46 there is a reference to COL Action Item 6.4.7-1. It appears this reference should be to COL Action Item 6.4-1.
2. The COL action item number 13.5.1-1 is used on page 7-18, but not in chapter 13. It should defined in Chapter 13 on page 13-18.
3. On DSER page 19-78 there is a reference to COL Action Item 19A.2.5-1. It appears this reference should be to COL Action Item 19A.2-1.
4. COL Action Item 11.4-1 is referenced on pages 20-145 and 20-151, but is not defined in chapter 11.
5. COL Action Item 18.9-2 is referenced on page 20-148, but is not defined in chapter 18.
6. The issues of Generic Letter 92-01 were resolved in AP600 without the need for a COL item. We believe AP1000 should be treated in the same manner.

Table 2

DCD COL Information Items not identified in the DSER as COL Action Items

DCD Table 1.8-2	DCD Subsection	Description
1.1-1	1.1.7	Construction and Startup Schedule
3.7-4	3.7.5.4	Reconciliation of Seismic Analyses of Nuclear Island Structures
3.8-2	3.8.6.2	Passive Containment Cooling System Water Storage Tank Examination
5.3-2	5.3.6.2	Reactor Vessel Materials Surveillance Program
5.3-4	5.3.6.4	Reactor Vessel Materials Properties Verification
6.1-1	6.1.3.1	Procedure Review for Austenitic Stainless Steels
6.3-1	6.3.8.1	Containment Cleanliness Program
9.1-1	9.1.6	New Fuel Rack
9.1-2	9.1.6	Criticality Analysis for New Fuel Rack
9.1-3	9.1.6	Spent Fuel Racks
9.1-4	9.1.6	Criticality Analysis for Spent Fuel Racks
9.1-5	9.1.6	Inservice Inspection Program of Cranes
9.1-6	9.1.6	Radiation Monitor
9.3-1	9.3.7	Air Systems (NUREG-0933 Issue 43)
9.5-2	9.5.1.8	Fire Protection Analysis Information
9.5-3	9.5.1.8	Regulatory Conformance
9.5-5	9.5.1.8	Operator Actions Minimizing Spurious ADS Actuation
9.5-9	9.5.4.7	Cathodic Protection
9.5-10	9.5.4.7	Fuel Degradation Protection
10.4-3	10.4.12.3	Potable Water
13.6-2	13.6.13.2	Vital Equipment Verification

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Attachment 2

Proposed DCD Changes Resulting from Westinghouse Review of COL Action Items

Attachment 2

Proposed DCD Changes Resulting from Westinghouse Review of AOL Action Items

DCD CHANGES:

As a result of the exercise to generate the cross-reference table to the DSER COL Action Items, inconsistencies between DCD Table 1.8-2 and various sections in the DCD were identified. The following changes will be made to Table 1.8-2 in Revision 7 and are included in the cross-reference to the DSER COL Action Items:

- A new item 2.5-3 will be added per response to DESR Open Item 3.7.2.16-1.
- Item 2.5-8 will be deleted. DCD section 2.5.4.6.5 was deleted in DCD Revision 3 but this item was inadvertently left in Table 1.8-2.
- Items between 2.5-3 and 2.5-8 will be renumbered accordingly.
- Item 3.7-5 will be deleted. DCD section 3.7.5.5 was deleted in DCD Revision 1 but this item was inadvertently left in Table 1.8-2.
- A new item 3.7-5 will be added to provide the appropriate pointer to the COL requirement to determine the location of the free-field accelerometer as stated in DCD section 3.7.4.2.1. A new DCD Section 3.7.5.5 will also be added.
- Item 3.8-3 will be deleted. DCD section 3.8.6.3 was deleted in DCD Revision 1 but this item was inadvertently left in Table 1.8-2.
- Item 3.8-4 will be renumbered accordingly.
- Item new item 3.8-4 will be added to provide the appropriate pointer to the COL requirement to perform in-service inspection of the containment vessel and described in section 3.8.2.7. A new DCD Section 3.8.6.4 will also be added.
- Item 4.4-2 was added in response to DSER Open Item 4.4-1.
- Item 8.3-1 will be renamed to more closely match the requirement.
- Item 13.3-3 will be deleted. This COL item was removed from section 13.3.1 in Revision 4 but was inadvertently left in Table 1.8-2.
- Item 15.7-1 referencing DCD Subsection 15.7.6 will be added to meet DSER COL Action item 15.3.8-1.
- Item 18.3-1 is deleted. There are no unique COL actions stated in DCD Section 18.3.1.

Attachment 2

Proposed DCD Changes Resulting from Westinghouse Review of AOL Action Items

The following markups to the DCD are shown in redline-strikeout

Table 1.8-2 (Sheet 1 of 6)

SUMMARY OF AP1000 STANDARD PLANT COMBINED LICENSE INFORMATION ITEMS

Item No.	Subject	Subsection
2.5-1	Basic Geologic and Seismic Information	2.5.1
2.5-2	Site Seismic and Tectonic Characteristics Information	2.5.2.1
2.5-3	**Geoscience Parameters**	**2.5.2.3**
2.5-~~3~~4	Surface Faulting	2.5.3
2.5-~~4~~5	Site and Structures	2.5.4.6.1
2.5-~~5~~6	Properties of Underlying Materials	2.5.4.6.2
2.5-~~6~~7	Excavation and Backfill	2.5.4.6.3
2.5-~~7~~8	Ground Water Conditions	2.5.4.6.4
~~2.5-8~~	~~Response of Soil and Rock to Dynamic Loading~~	~~2.5.4.6.5~~
2.5-9	Liquefaction Potential	2.5.4.6.6
2.5-10	Bearing Capacity	2.5.4.6.7
2.5-11	Earth Pressures	2.5.4.6.8
2.5-12	Static and Dynamic Stability of Facilities	2.5.4.6.10
~~3.7-5~~	~~Seismic Analyses of Nuclear Island Structures at Soil Sites~~	~~3.7.5.5~~
3.7-5	**Location of Free-Field Acceleration Sensor**	**3.7.5.5**
~~3.8-3~~	~~Design Summary Reports – Structures~~	~~3.8.6.3~~
3.8-~~4~~3	As-Built Summary Report	3.8.6.43
3.8-4	**In-Service Inspection of the Containment Vessel**	**3.8.6.4**
4.4-1	Changes to Reference Reactor Design	4.4.7
4.4-2	**Confirm Assumptions for Safety Analyses DNBR Limits**	**4.4.7**
5.2-1	ASME Code and Addenda	5.2.6.1

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Proposed DCD Changes Resulting from Westinghouse Review of AOL Action Items

8.3-1	~~Onsite Electrical Power~~**Grounding and Lightning Protection**	8.3.3
~~13.3-3~~	~~Capability to Obtain and Analyze Samples~~	~~13.3.1~~
14.4-6	First-Plant-Only and Three-Plant-Only Tests	14.4.6
15.7-1	**Consequences of Tank Failure**	**15.7.6**
16.1-1	Technical Specification Preliminary Information	16.1
~~18.3-1~~	~~Operating Experience Review~~	~~18.3.1~~

The following sections will be added to DCD Chapter 3:

3.7.5.5 Free Field Acceleration Sensor

The Combined License applicant will determine the location for the free-field acceleration sensor as described in subsection 3.7.4.2.1.

3.8.6.4 In-Service Inspection of the Containment Vessel

The Combined License applicant will perform in-service inspection of the containment according to the ASME Code Section XI, Subsection IWE as described in Subsection 3.8.2.7.